

WHAT IS CLAIMED IS:

1. A refuse vehicle comprising:
a transmission; and
a control system which comprises:
a plurality of microprocessor based interface modules;
a communication network configured to interconnect
the plurality of interface modules; and
at least one output device;
wherein the control system is configured to disable the
output device when the transmission is in gear.
2. The refuse vehicle of claim 1 wherein the control system is
configured to, when the transmission is in gear, enable the output device
when a brake is engaged and/or a clutch is disengaged.
3. The refuse vehicle of claim 2 wherein the transmission is a
manual transmission.
4. The refuse vehicle of claim 1 further comprising:
a chassis which includes the transmission; and
a body;
wherein the output device pertains to the body of the refuse
vehicle.
5. The refuse vehicle of claim 1 wherein the output device
receives power from a power takeoff.
6. The refuse vehicle of claim 1 wherein the control system is
configured to enable the output device by moving the transmission out of
gear when a brake is engaged and the refuse vehicle is not moving faster
than a threshold speed.

7. The refuse vehicle of claim 6 wherein the control system is configured to move the transmission into gear when the brake is disengaged.

8. The refuse vehicle of claim 6 wherein the threshold speed is between approximately 2 kilometers per hour and approximately 20 kilometers per hour.

9. The refuse vehicle of claim 8 wherein the threshold speed is between approximately 4 kilometers per hour and approximately 8 kilometers per hour.

10. The refuse vehicle of claim 1 wherein the control system is configured to disable the output device from being actuated when the transmission is in gear, the control system being configured to enable, when the transmission is in gear, the output device to complete an operation initiated when the transmission was not in gear.

11. The refuse vehicle of claim 10 wherein the operation comprises compacting refuse in the refuse vehicle.

12. The refuse vehicle of claim 10 wherein the operation comprises loading refuse in the refuse vehicle.

13. The refuse vehicle of claim 1 wherein the control system further comprises:

- a plurality of input devices;
- a plurality of output devices; and
- a transmission subsystem control system which includes an electronic control unit, the transmission subsystem control system being configured to include transmission status information;

wherein each of the plurality of interface modules is coupled to respective ones of the plurality of input devices and the plurality of output devices;

wherein the transmission status information is communicated from the transmission subsystem control system to at least one of the plurality of interface modules where it is stored.

14. A refuse vehicle comprising:

a control system which comprises:

a plurality of microprocessor based interface modules;

a communication network configured to interconnect the plurality of interface modules; and

at least one output device;

wherein the control system is configured to disable the output device when the refuse vehicle reaches a threshold speed.

15. The refuse vehicle of claim 14 wherein the threshold speed is between approximately 2 kilometers per hour and approximately 20 kilometers per hour.

16. The refuse vehicle of claim 15 wherein the threshold speed is between approximately 4 kilometers per hour and approximately 10 kilometers per hour.

17. The refuse vehicle of claim 14 wherein the output device pertains to a refuse loader.

18. The refuse vehicle of claim 14 wherein the output device pertains to a refuse compactor.

19. The refuse vehicle of claim 14 further comprising:
a chassis; and

a body;
wherein the output device pertains to the body of the refuse vehicle.

20. A refuse vehicle comprising:
a footboard; and
a control system which comprises:
a plurality of microprocessor based interface modules;
a communication network configured to interconnect the plurality of interface modules; and
at least one output device;
wherein the control system is configured to disable the output device when a person is positioned on the footboard.

21. The refuse vehicle of claim 20 wherein the control system is configured to prevent the refuse vehicle from moving faster than a threshold speed when a person is positioned on the footboard.

22. The refuse vehicle of claim 21 wherein the threshold speed is between approximately 15 kilometers per hour and approximately 40 kilometers per hour.

23. The refuse vehicle of claim 21 wherein the threshold speed is between approximately 25 kilometers per hour and approximately 35 kilometers per hour.

24. The refuse vehicle of claim 20 wherein the control system is configured to disable a compacter when a person is positioned on the footboard.

25. The refuse vehicle of claim 20 wherein the control system is configured to disable a refuse loader when a person is positioned on the footboard.

26. The refuse vehicle of claim 20 wherein the control system is configured to disable the refuse vehicle from moving in reverse when a person is positioned on the footboard.

27. The refuse vehicle of claim 20 wherein the control system is configured to disable a tailgate of the refuse vehicle from opening and/or closing when a person is positioned on the footboard.

28. The refuse vehicle of claim 20 further comprising:
a chassis; and
a body:
wherein the output device pertains to the body of the refuse vehicle.

29. The refuse vehicle of claim 20 wherein the control system further comprises:
a plurality of input devices;
a plurality of output devices; and
a subsystem control system which includes an electronic control unit, the subsystem control system being configured to include vehicle speed information;
wherein each of the plurality of interface modules is coupled to respective ones of the plurality of input devices and the plurality of output devices;
wherein the vehicle speed information is communicated from the subsystem control system to at least one of the plurality of interface modules where it is stored.

30. The refuse vehicle of claim 20 further comprising:
a chassis; and
a body which includes the footboard;
wherein the output device pertains to the body of the refuse vehicle.

31. A refuse vehicle comprising:
a control system which comprises:
a plurality of microprocessor based interface modules;
a communication network configured to interconnect the plurality of interface modules; and
at least one output device:
wherein the control system is configured to disable the output device when the refuse vehicle is moving in reverse.

32. The refuse vehicle of claim 31 wherein the output device receives power from a power takeoff.

33. The refuse vehicle of claim 31 wherein the output device pertains to a group consisting of a refuse loader, a refuse compactor, a tailgate, and combinations thereof.

34. The refuse vehicle of claim 31 wherein the control system is configured to disable the output device from being actuated when the vehicle is moving in reverse, the control system being configured to enable, when the vehicle is moving in reverse, the output device to complete an operation initiated when the vehicle was not moving in reverse.

35. The refuse vehicle of claim 31 further comprising:
a chassis; and
a body;

wherein the output device pertains to the body of the refuse vehicle.

36. A refuse vehicle comprising:

a chassis which includes an engine and a transmission;

a body which includes a footboard; and

a control system which comprises:

a plurality of microprocessor based interface modules;

and

a communication network configured to interconnect the plurality of interface modules;

wherein the control system is configured to shut the engine off when the transmission is in reverse and a person is positioned on the footboard.

37. A refuse vehicle comprising:

a chassis;

a body which includes a hydraulic oil reservoir; and

a control system which comprises:

a plurality of microprocessor based interface modules;

a communication network configured to interconnect the plurality of interface modules; and

a hydraulic output device;

wherein the control system is configured to disable the hydraulic output device when the hydraulic oil reservoir is low.

38. A refuse vehicle comprising:

a chassis;

a body which includes a refuse handling device; and

a control system which comprises:

a plurality of microprocessor based interface modules;
and

a communication network configured to interconnect
the plurality of interface modules;

wherein the control system is configured to prevent the
refuse vehicle from exceeding a threshold speed when the refuse handling
device is in a working position.

39. The refuse vehicle of claim 38 wherein the threshold speed is
between approximately 2 kilometers per hour and approximately 20
kilometers per hour.

40. The refuse vehicle of claim 38 wherein the threshold speed is
between approximately 3 kilometers per hour and approximately 8
kilometers per hour.

41. The refuse vehicle of claim 38 wherein the refuse handling
device is a refuse loader.

42. A refuse vehicle comprising:
a chassis;
a body;
a lubrication system configured to lubricate components of
the body of the refuse vehicle; and
a control system comprising:
a plurality of microprocessor based interface modules;
and
a communication network configured to interconnect
the plurality of interface modules;
wherein the control system is configured to initiate a
lubrication cycle at periodic intervals.

43. The refuse vehicle of claim 42 wherein the periodic intervals range from approximately five minutes to approximately sixty minutes.

44. The refuse vehicle of claim 42 wherein the control system comprises at least one input device configured to detect whether one or more components are being lubricated.

45. The refuse vehicle of claim 44 wherein the input device is configured to detect the pressure pulses of a lubricant in the lubricant system.

46. A refuse vehicle comprising:
a control system comprising:
a plurality of microprocessor based interface modules;
and
a communication network configured to interconnect the plurality of interface modules;
wherein the control system is configured to prevent the refuse loader from initiating a refuse handling operation when the vehicle is moving, the control system being configured to allow, when the vehicle is moving, the refuse loader to complete the refuse handling operation initiated when the vehicle was not moving.

47. The refuse vehicle of claim 46 wherein the refuse handling operation comprises compacting refuse in the refuse vehicle.

48. The refuse vehicle of claim 46 wherein the refuse handling operation comprises loading refuse in the refuse vehicle.

49. A refuse vehicle comprising:
a chassis which includes a transmission;
a body;

a control system comprising:
a plurality of input devices including a camera;
a plurality of output devices including a display;
a plurality of microprocessor based interface modules
and a communication network, the plurality of interface modules being
interconnected to each other by way of the communication network, each
of the plurality of interface modules being coupled to respective ones of
the plurality of input devices and the plurality of output devices, and the
plurality of interface modules storing I/O status information for the
plurality of input devices and the plurality of output devices; and
wherein the control system is configured to display at least
one image of an area to the rear of the refuse vehicle on the display when
the transmission of the refuse vehicle is in reverse and/or when the refuse
vehicle is moving in reverse.

50. The refuse vehicle of claim 49 wherein the display is
positioned in an operator compartment of the refuse vehicle.

51. The refuse vehicle of claim 49 wherein the display displays
video images.

52. A refuse vehicle comprising:
a control system comprising:
a plurality of input devices including an emergency
stop;
a plurality of output devices;
a plurality of microprocessor based interface modules
and a communication network, the plurality of interface modules
being interconnected to each other by way of the communication
network, each of the plurality of interface modules being coupled to
respective ones of the plurality of input devices and the plurality of

output devices, and the plurality of interface modules storing I/O status information for the plurality of input devices and the plurality of output devices; and

wherein the control system is configured to disable the plurality of output devices when the emergency stop is activated.

53. The refuse vehicle of claim 52 further comprising:

a chassis; and

a body;

wherein the plurality of output devices include output devices pertaining to the body that receive power from a power takeoff.

54. The refuse vehicle of claim 52 further comprising:

a chassis; and

a body;

wherein the plurality of output devices are those output devices pertaining to the body.

55. A method for controlling a refuse vehicle comprising:

disabling a plurality of output devices of the refuse vehicle when a transmission of the refuse vehicle is in gear;

enabling the plurality of output devices when a brake of the refuse vehicle is engaged;

disabling the plurality of output devices when the brake pedal is disengaged;

wherein all three steps are performed by a control system that comprises a plurality of microprocessor based interface modules, the plurality of interface modules being interconnected by way of a communication network.

56. The method of claim 55 wherein the plurality of output devices are enabled by moving the transmission out of gear when the brake is engaged.

57. The method of claim 56 wherein the plurality of output devices are disabled by moving the transmission back into gear when the brake is disengaged.

58. The method of claim 55 wherein the plurality of output devices receive power from a power takeoff.